



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water Ste. 300
Wichita KS 67202

ATTN: Rocky Milford

Downing A #1-19

19 1s 35w Rawlins,KS

Start Date: 2013.11.30 @ 04:15:00

End Date: 2013.11.30 @ 12:54:30

Job Ticket #: 53600 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.12.06 @ 10:03:30

Murfin Drilling Co. 19 1s 35w Rawlins,KS Downing A #1-19 DST # 1 Foraker 2013.11.30



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 53600

DST#: 1

ATTN: Rocky Milford

Test Start: 2013.11.30 @ 04:15:00

Tool Information

Drill Pipe:	Length: 3475.00 ft	Diameter: 3.80 inches	Volume: 48.75 bbl	Tool Weight:	2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose:	45000.00 lb
			<u>Total Volume: 49.66 bbl</u>	Tool Chased	2.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial	40000.00 lb
Depth to Top Packer:	3678.00 ft			Final	40000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	51.00 ft				
Tool Length:	79.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3655.00	
Hydraulic tool	5.00			3660.00	
Jars	5.00			3665.00	
Safety Joint	3.00			3668.00	
Packer	5.00			3673.00	28.00 Bottom Of Top Packer
Packer	5.00			3678.00	
Stubb	1.00			3679.00	
Recorder	0.00	8673	Inside	3679.00	
Recorder	0.00	8651	Outside	3679.00	
Perforations	14.00			3693.00	
change Over Sub	1.00			3694.00	
Blank Spacing	31.00			3725.00	
Change Over Sub	1.00			3726.00	
Bullnose	3.00			3729.00	51.00 Bottom Packers & Anchor

Total Tool Length: 79.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 53600

DST#: 1

ATTN: Rocky Milford

Test Start: 2013.11.30 @ 04:15:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 75.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
25.00	mud w ith oil spots-1%o99%m	0.123

Total Length: 25.00 ft Total Volume: 0.123 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

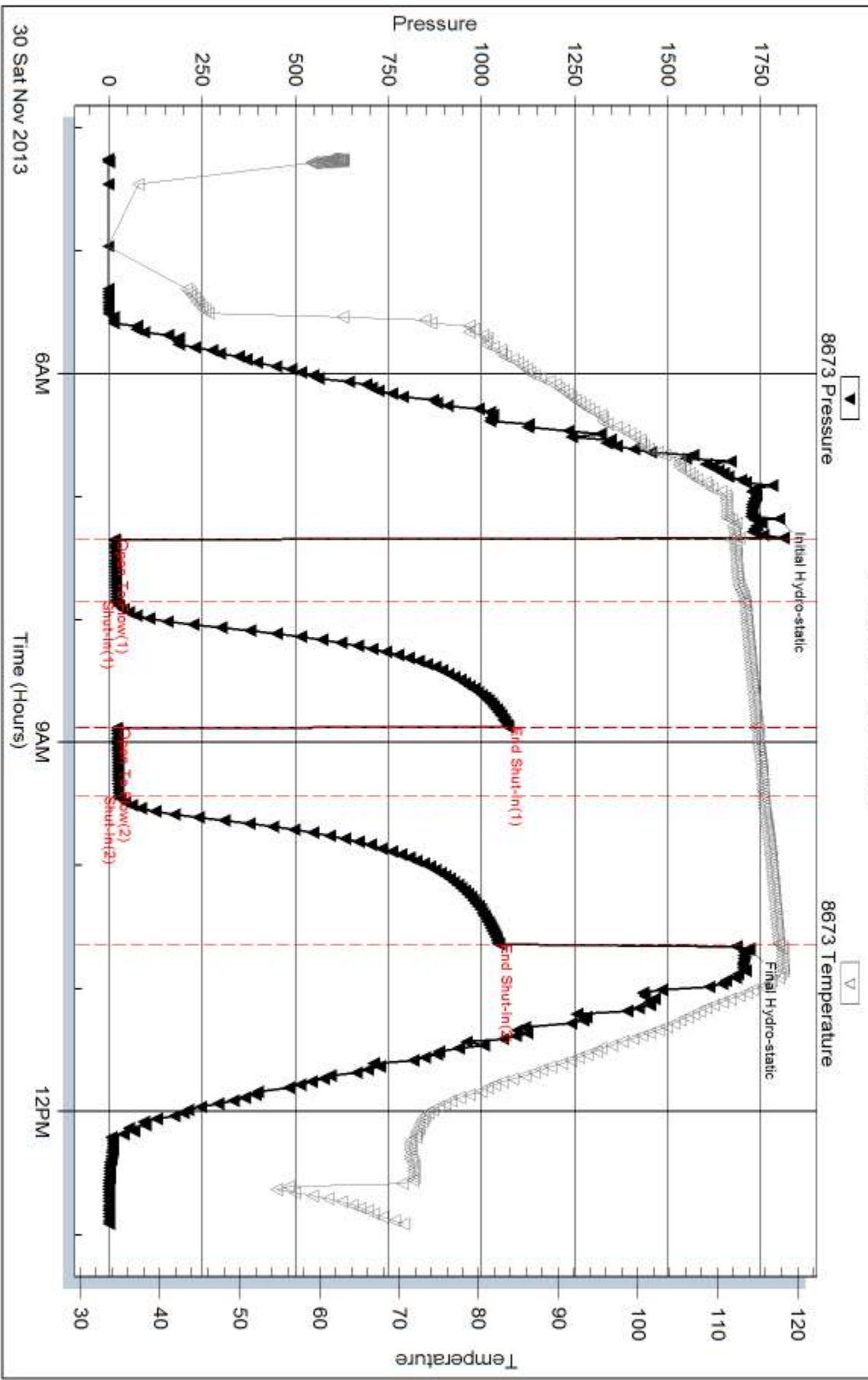
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: On loc. at 4:10 Tool made up on w alk at 4:45. Tool made up in table, w ait on jars. and trip in to circ. sub 5:35. (truck batterys w ere dead jumped it and then had to jump it again before i left tow n 10 mins. late to rig. didn't rec. call untill 2am and i took job for james.

Pressure vs. Time

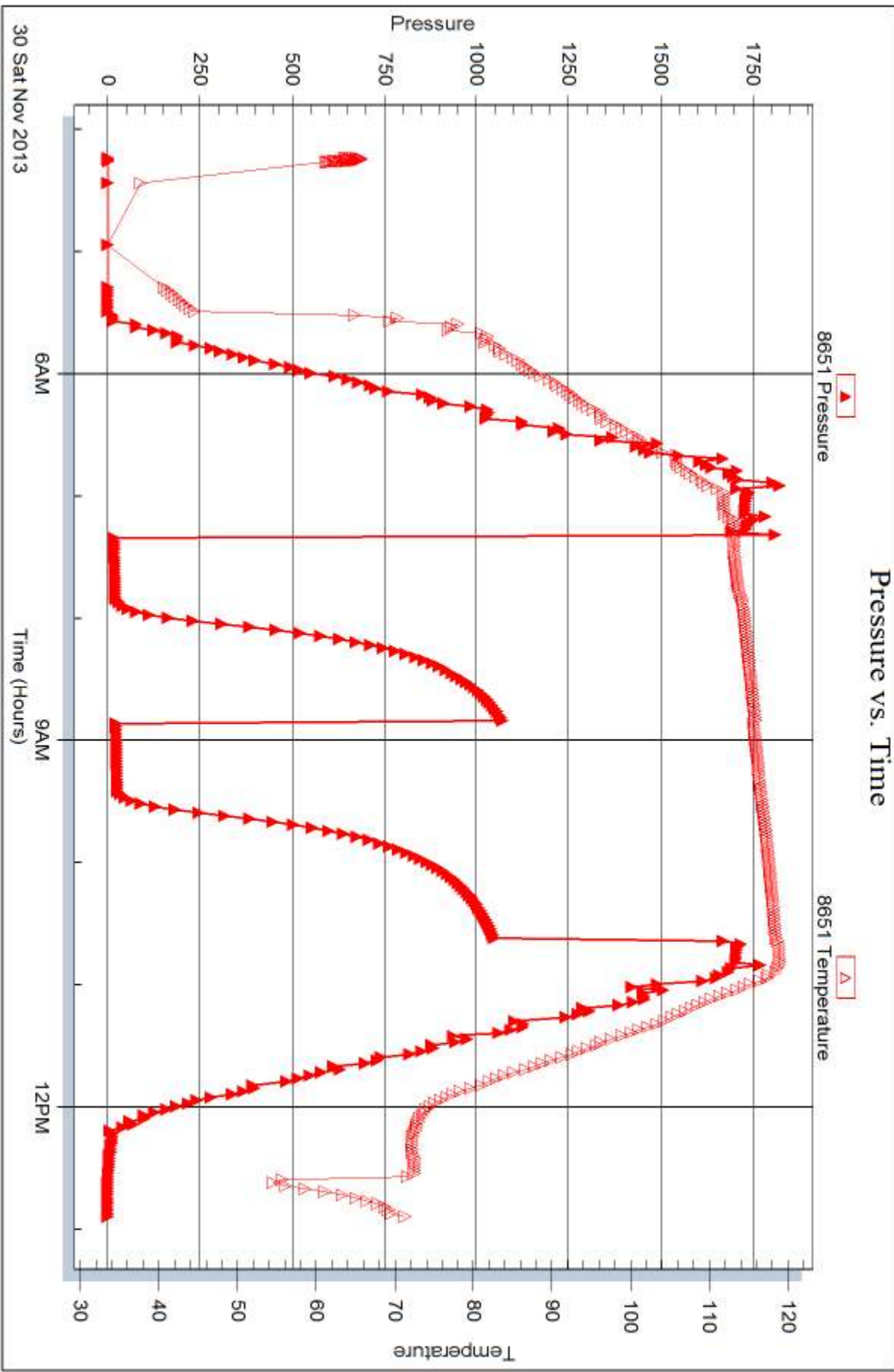


Serial #: 8651

Outside Murfin Drilling Co.

Downing A #1-19

DST Test Number: 1



Tribble Testing, Inc

Ref. No: 53600

Printed: 2013.12.06 @ 10:03:32



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water Ste. 300
Wichita KS 67202

ATTN: Rocky Milford

Downing A #1-19

19 1s 35w Rawlins,KS

Start Date: 2013.12.01 @ 16:10:00

End Date: 2013.12.02 @ 02:08:30

Job Ticket #: 55926 DST #: 2

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.12.06 @ 10:02:52



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co.
250 N. Water Ste. 300
Wichita KS 67202
ATTN: Rocky Milford

19 1s 35w Rawlins,KS
Downing A #1-19
Job Ticket: 55926 **DST#: 2**
Test Start: 2013.12.01 @ 16:10:00

GENERAL INFORMATION:

Formation: **LKC-A**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:28:30
Time Test Ended: 02:08:30
Interval: **4084.00 ft (KB) To 4175.00 ft (KB) (TVD)**
Total Depth: 4175.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Chuck Kreuzer Jr.
Unit No: 61
Reference Elevations: 3211.00 ft (KB)
3206.00 ft (CF)
KB to GR/CF: 5.00 ft

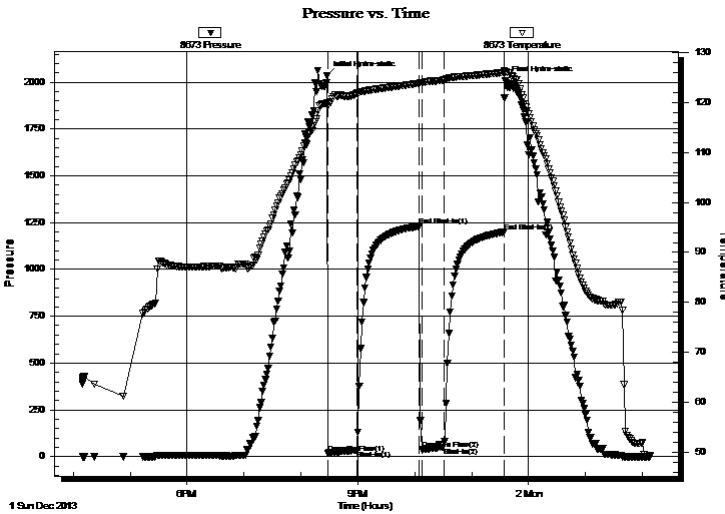
Serial #: 8673

Inside

Press@RunDepth: 49.76 psig @ 4085.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.12.01 End Date: 2013.12.02 Last Calib.: 2013.12.02
Start Time: 16:10:01 End Time: 02:08:30 Time On Btm: 2013.12.01 @ 20:27:30
Time Off Btm: 2013.12.01 @ 23:35:30

TEST COMMENT: IF: Weak surface blow , over 30 mins.
IS: No blow back over 60 mins.
FF: Weak blow , After 10 mins. off and on over next 20 mins.
FS: No blow back.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2033.10	119.97	Initial Hydro-static
1	18.20	119.15	Open To Flow (1)
32	34.44	121.86	Shut-In(1)
97	1229.96	123.83	End Shut-In(1)
100	38.84	123.90	Open To Flow (2)
123	49.76	124.55	Shut-In(2)
187	1199.49	126.00	End Shut-In(2)
188	2006.85	126.11	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	mud-100%m	0.31

* Recovery from multiple tests

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co.
250 N. Water Ste. 300
Wichita KS 67202
ATTN: Rocky Milford

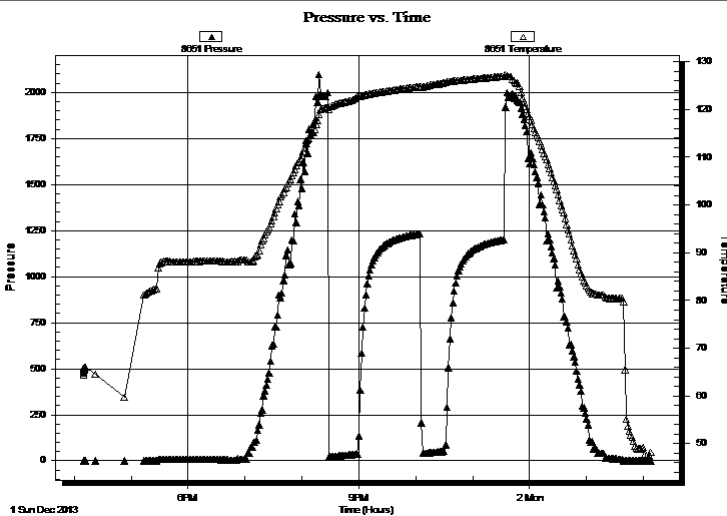
19 1s 35w Rawlins, KS
Downing A #1-19
Job Ticket: 55926 **DST#: 2**
Test Start: 2013.12.01 @ 16:10:00

GENERAL INFORMATION:

Formation: **LKC-A**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:28:30
Time Test Ended: 02:08:30
Interval: **4084.00 ft (KB) To 4175.00 ft (KB) (TVD)**
Total Depth: 4175.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches
Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Chuck Kreutzer Jr.
Unit No: 61
Reference Elevations: 3211.00 ft (KB)
3206.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8651 Outside
Press@RunDepth: psig @ 4085.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.12.01 End Date: 2013.12.02 Last Calib.: 2013.12.02
Start Time: 16:10:01 End Time: 02:08:30 Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Weak surface blow, over 30 mins.
IS: No blow back over 60 mins.
FF: Weak blow, After 10 mins. off and on over next 20 mins.
FS: No blow back.



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery		
Length (ft)	Description	Volume (bbl)
63.00	mud-100%m	0.31

* Recovery from multiple tests

Gas Rates			
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 55926

DST#: 2

ATTN: Rocky Milford

Test Start: 2013.12.01 @ 16:10:00

Tool Information

Drill Pipe:	Length: 3882.00 ft	Diameter: 3.80 inches	Volume: 54.45 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 55.36 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	4084.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	91.00 ft			
Tool Length:	119.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4061.00	
Hydraulic tool	5.00			4066.00	
Jars	5.00			4071.00	
Safety Joint	3.00			4074.00	
Packer	5.00			4079.00	28.00 Bottom Of Top Packer
Packer	5.00			4084.00	
Stubb	1.00			4085.00	
Recorder	0.00	8673	Inside	4085.00	
Recorder	0.00	8651	Outside	4085.00	
Perforations	22.00			4107.00	
change Over Sub	1.00			4108.00	
Drill Pipe	63.00			4171.00	
Change Over Sub	1.00			4172.00	
Bullnose	3.00			4175.00	91.00 Bottom Packers & Anchor

Total Tool Length: 119.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 55926

DST#: 2

ATTN: Rocky Milford

Test Start: 2013.12.01 @ 16:10:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	mud-100%m	0.310

Total Length: 63.00 ft Total Volume: 0.310 bbl

Num Fluid Samples: 0

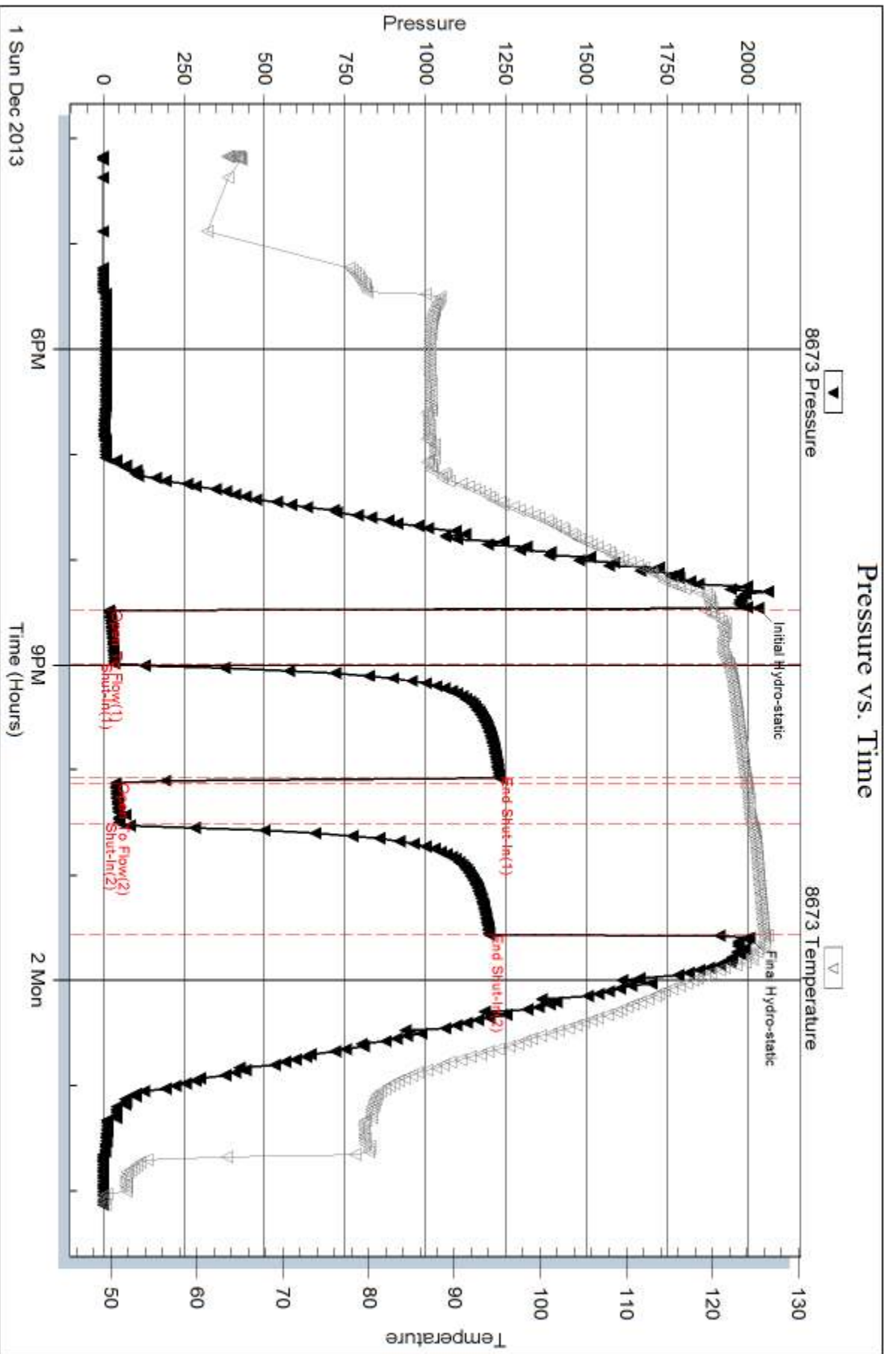
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Noticed hyd. fluid on catw alk by the by pass sub on my hdy. tool. had a new on brought out (5 to 6:45). 1hr. 45 mins. of rig time.

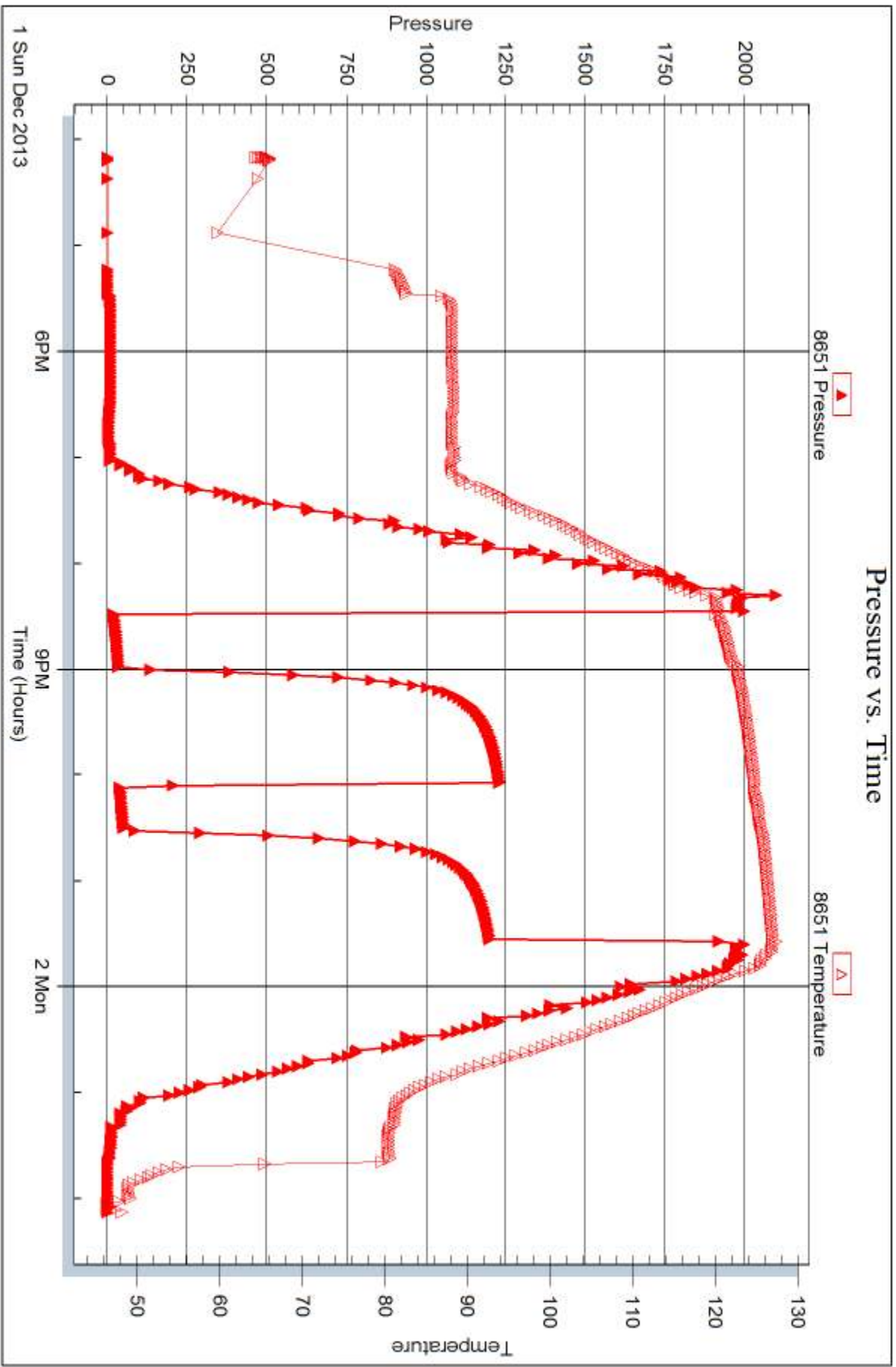


Serial #: 8651

Outside Murfin Drilling Co.

Downing A #1-19

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 55926

Printed: 2013.12.06 @ 10:02:54



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water Ste. 300
Wichita KS 67202

ATTN: Rocky Milford

Downing A #1-19

19 1s 35w Rawlins,KS

Start Date: 2013.12.02 @ 10:35:00

End Date: 2013.12.02 @ 19:45:30

Job Ticket #: 55927 DST #: 3

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.12.06 @ 10:02:04



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co.
250 N. Water Ste. 300
Wichita KS 67202
ATTN: Rocky Milford

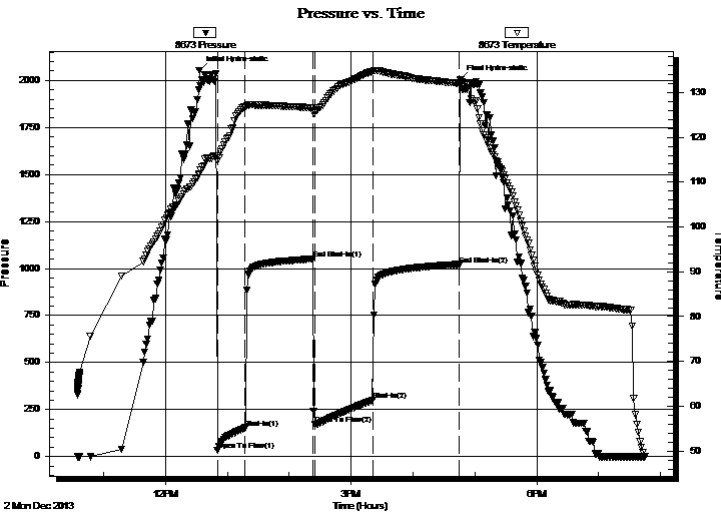
19 1s 35w Rawlins, KS
Downing A #1-19
Job Ticket: 55927 **DST#: 3**
Test Start: 2013.12.02 @ 10:35:00

GENERAL INFORMATION:

Formation: LKC-D			
Deviated: No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Reset)	
Time Tool Opened: 12:50:30		Tester: Chuck Kreuzer Jr.	
Time Test Ended: 19:45:30		Unit No: 61	
Interval: 4156.00 ft (KB) To 4218.00 ft (KB) (TVD)		Reference Elevations: 3211.00 ft (KB)	
Total Depth: 4218.00 ft (KB) (TVD)		3206.00 ft (CF)	
Hole Diameter: 7.88 inches	Hole Condition: Fair	KB to GR/CF: 5.00 ft	

Serial #: 8673	Inside		
Press@RunDepth: 299.40 psig @ 4157.00 ft (KB)		Capacity: 8000.00 psig	
Start Date: 2013.12.02	End Date: 2013.12.02	Last Calib.: 2013.12.02	
Start Time: 10:35:01	End Time: 19:45:30	Time On Btm: 2013.12.02 @ 12:33:00	
		Time Off Btm: 2013.12.02 @ 16:46:00	

TEST COMMENT: IF: Strong blow , Built to B.O.B in 15 mins.
 IS: Blow back after 5 mins. Built to 3 in. over 60 mins.
 FF: Strong blow , Built to B.O.B in 20 mins.
 FS: Blow back after 5 mins. Weak surface Died in 60 mins



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2053.71	111.88	Initial Hydro-static
18	34.60	114.76	Open To Flow (1)
44	153.44	126.79	Shut-In(1)
110	1052.28	126.57	End Shut-In(1)
112	170.29	125.59	Open To Flow (2)
168	299.40	134.67	Shut-In(2)
252	1021.21	132.07	End Shut-In(2)
253	2004.52	131.67	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
185.00	gocmw -5%g5%o10%m70%w	0.91
126.00	gvsocmw -10%g1%o30%m59%w	1.77
126.00	gw ocm-10%g10%w 10%o70%m	1.77
63.00	gmco-5%g10%m85%o	0.88
126.00	go-20%g80%o	1.77
0.00	252 ft. of gas in pipe	0.00

* Recovery from multiple tests

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 55927

DST#: 3

ATTN: Rocky Milford

Test Start: 2013.12.02 @ 10:35:00

Tool Information

Drill Pipe:	Length: 3975.00 ft	Diameter: 3.80 inches	Volume: 55.76 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 56.67 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	4156.00 ft			Final 47000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	62.00 ft			
Tool Length:	90.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4133.00	
Hydraulic tool	5.00			4138.00	
Jars	5.00			4143.00	
Safety Joint	3.00			4146.00	
Packer	5.00			4151.00	28.00 Bottom Of Top Packer
Packer	5.00			4156.00	
Stubb	1.00			4157.00	
Recorder	0.00	8673	Inside	4157.00	
Recorder	0.00	8651	Outside	4157.00	
Perforations	25.00			4182.00	
change Over Sub	1.00			4183.00	
Blank Spacing	31.00			4214.00	
Change Over Sub	1.00			4215.00	
Bullnose	3.00			4218.00	62.00 Bottom Packers & Anchor

Total Tool Length: 90.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 55927

DST#: 3

ATTN: Rocky Milford

Test Start: 2013.12.02 @ 10:35:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

40000 ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.18 in³

Gas Cushion Type:

Resistivity: 0.20 ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
185.00	gocmw -5%g5%o10%m70%w	0.910
126.00	gvsocmw -10%g1%o30%m59%w	1.767
126.00	gw ocm-10%g10%w 10%o70%m	1.767
63.00	gmco-5%g10%m85%o	0.884
126.00	go-20%g80%o	1.767
0.00	252 ft. of gas in pipe	0.000

Total Length: 626.00 ft

Total Volume: 7.095 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

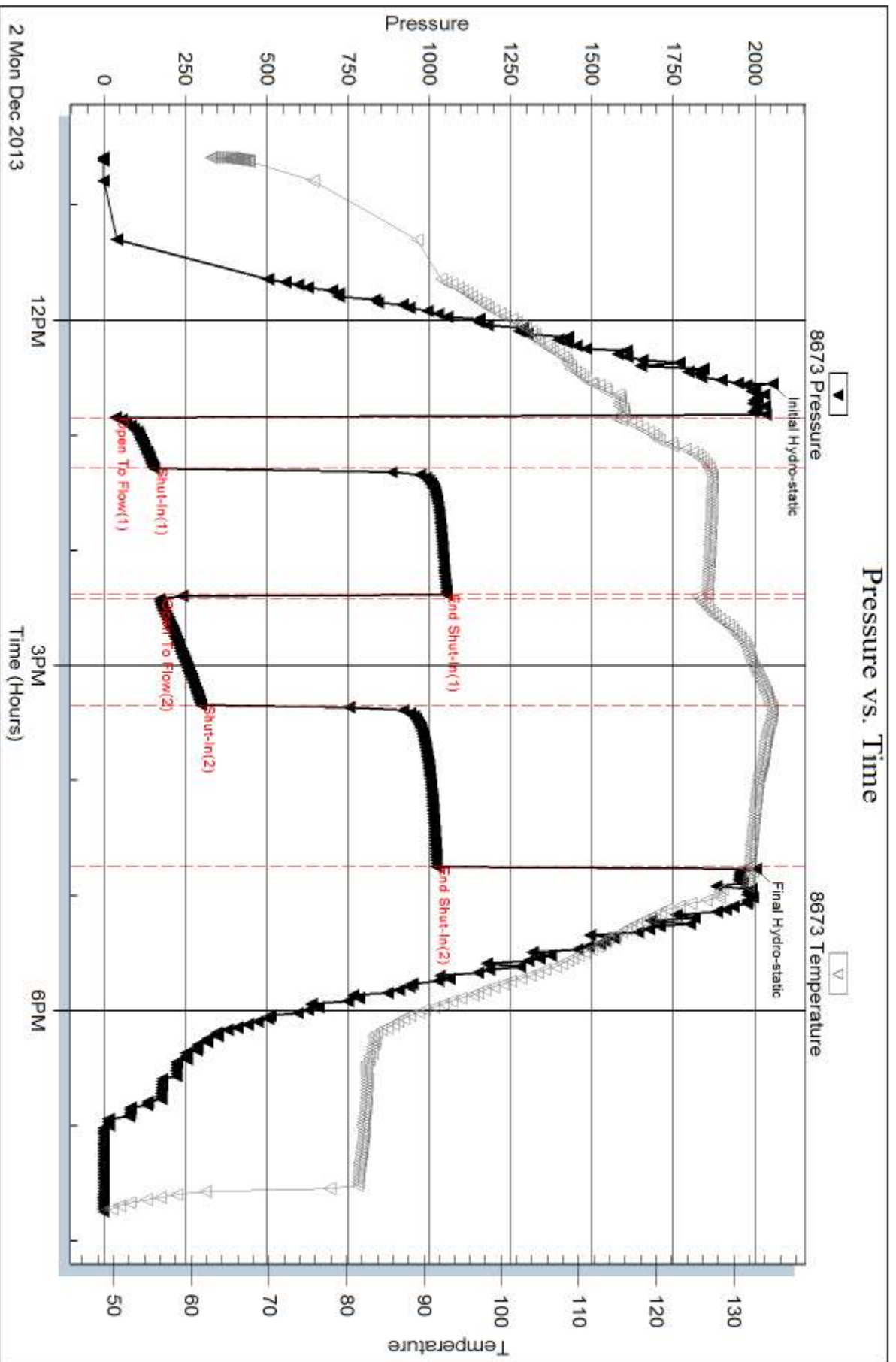
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

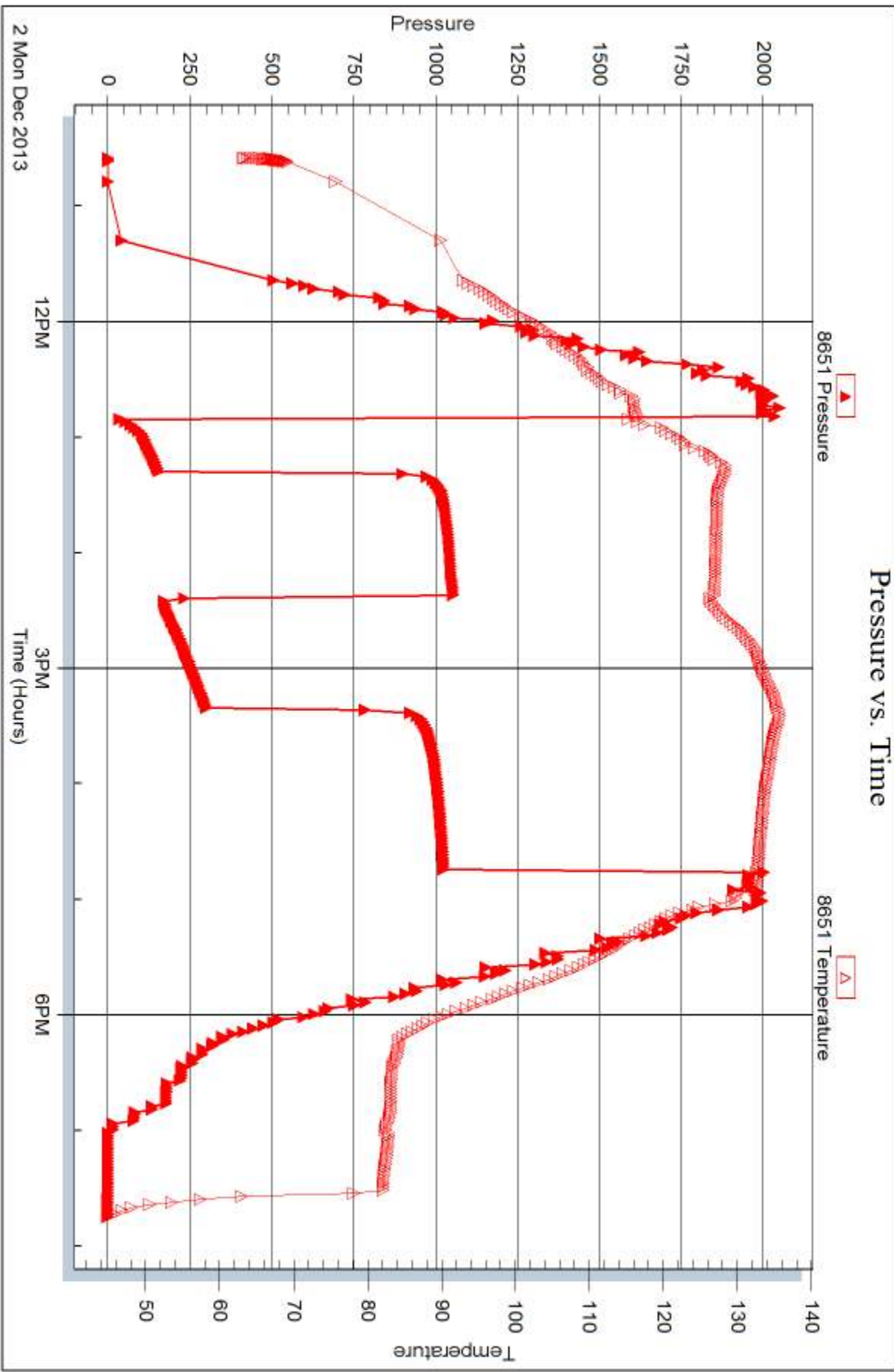


Serial #: 8651

Outside Murfin Drilling Co.

Downing A #1-19

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water Ste. 300
Wichita KS 67202

ATTN: Rocky Milford

Downing A #1-19

19 1s 35w Rawlins,KS

Start Date: 2013.12.03 @ 05:32:00

End Date: 2013.12.03 @ 13:26:30

Job Ticket #: 55928 DST #: 4

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.12.06 @ 10:01:18



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 55928

DST#: 4

ATTN: Rocky Milford

Test Start: 2013.12.03 @ 05:32:00

GENERAL INFORMATION:

Formation: **LKC-G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:15:30

Time Test Ended: 13:26:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

Interval: 4212.00 ft (KB) To 4275.00 ft (KB) (TVD)

Reference Elevations: 3211.00 ft (KB)

Total Depth: 4275.00 ft (KB) (TVD)

3206.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8673

Inside

Press@RunDepth: 68.51 psig @ 4215.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.12.03

End Date:

2013.12.03

Last Calib.: 2013.12.03

Start Time: 05:32:01

End Time:

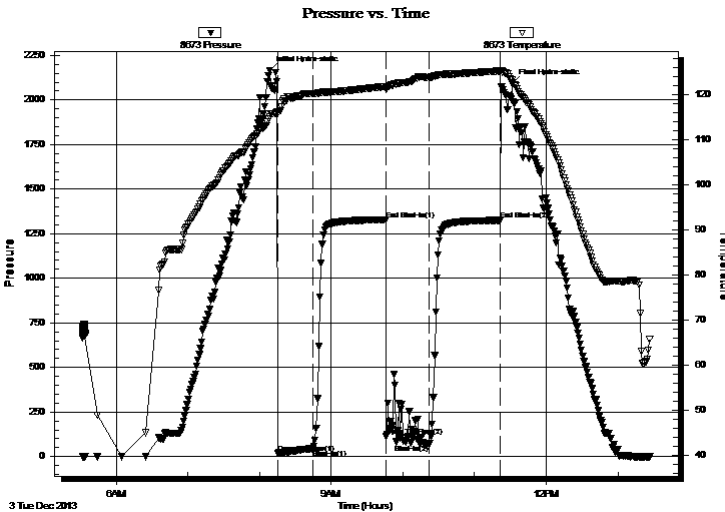
13:26:30

Time On Btm: 2013.12.03 @ 08:08:30

Time Off Btm: 2013.12.03 @ 11:31:30

TEST COMMENT: IF: Weak blow , Surface over over 30 mins.
IS: No blow back over 60 mins.
FF: No blow over 30 mins.
FS: No blow back over 60 mins.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2166.12	115.11	Initial Hydro-static
7	19.30	116.09	Open To Flow (1)
36	43.29	120.09	Shut-In(1)
97	1328.36	121.75	End Shut-In(1)
98	111.27	121.24	Open To Flow (2)
134	68.51	123.74	Shut-In(2)
193	1325.35	125.19	End Shut-In(2)
203	2092.73	123.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	ocm-15%o85%m	0.44

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 55928

DST#: 4

ATTN: Rocky Milford

Test Start: 2013.12.03 @ 05:32:00

Tool Information

Drill Pipe:	Length: 4014.00 ft	Diameter: 3.80 inches	Volume: 56.31 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 57.22 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4214.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	61.00 ft			
Tool Length:	89.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	5.00			4191.00	
Hydraulic tool	5.00			4196.00	
Jars	5.00			4201.00	
Safety Joint	3.00			4204.00	
Packer	5.00			4209.00	28.00 Bottom Of Top Packer
Packer	5.00			4214.00	
Stubb	1.00			4215.00	
Recorder	0.00	8673	Inside	4215.00	
Recorder	0.00	8651	Outside	4215.00	
Perforations	24.00			4239.00	
change Over Sub	1.00			4240.00	
Blank Spacing	31.00			4271.00	
Change Over Sub	1.00			4272.00	
Bullnose	3.00			4275.00	61.00 Bottom Packers & Anchor

Total Tool Length: 89.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 55928

DST#: 4

ATTN: Rocky Milford

Test Start: 2013.12.03 @ 05:32:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	ocm-15%o85%m	0.443

Total Length: 90.00 ft Total Volume: 0.443 bbl

Num Fluid Samples: 0

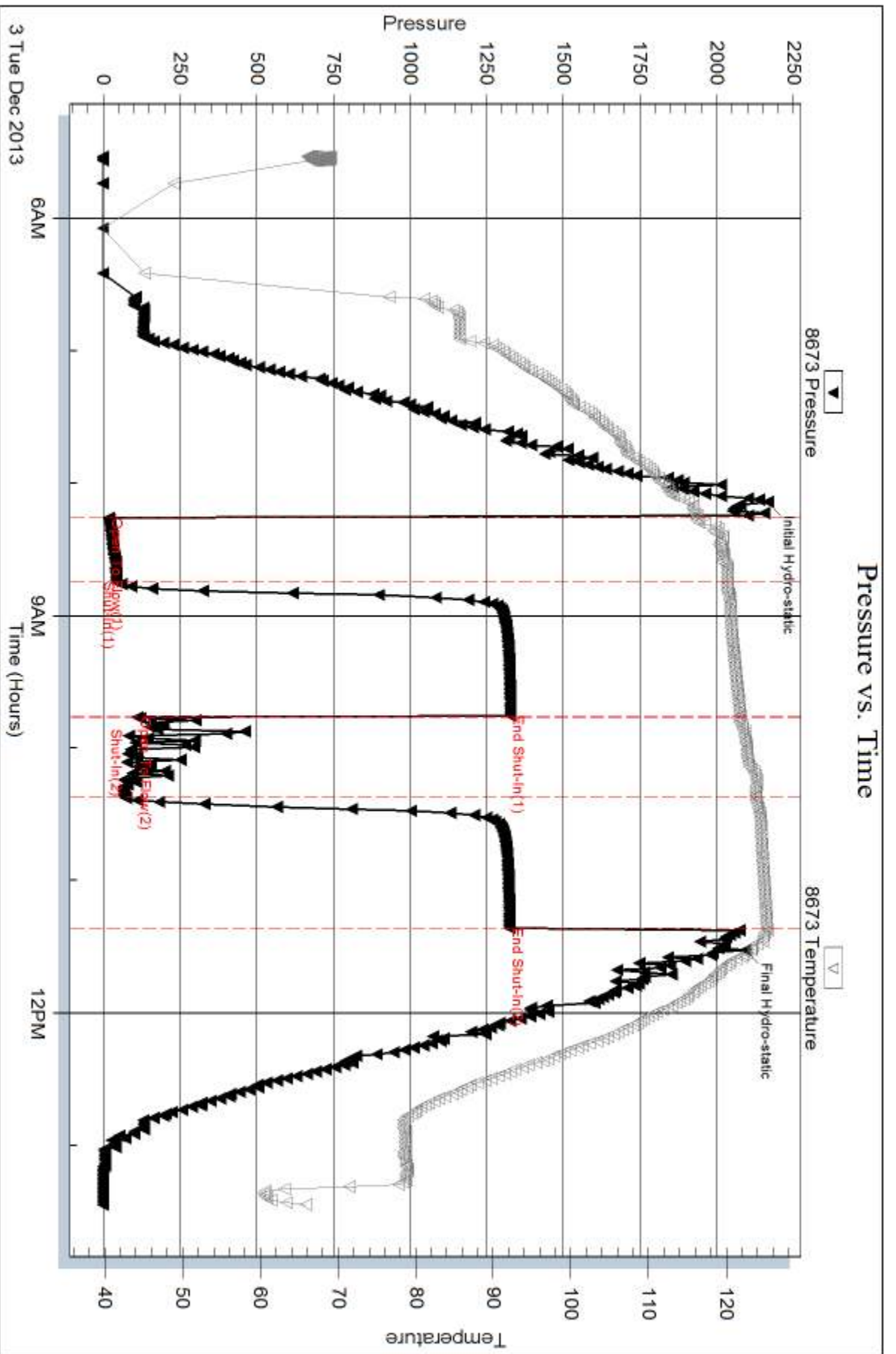
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

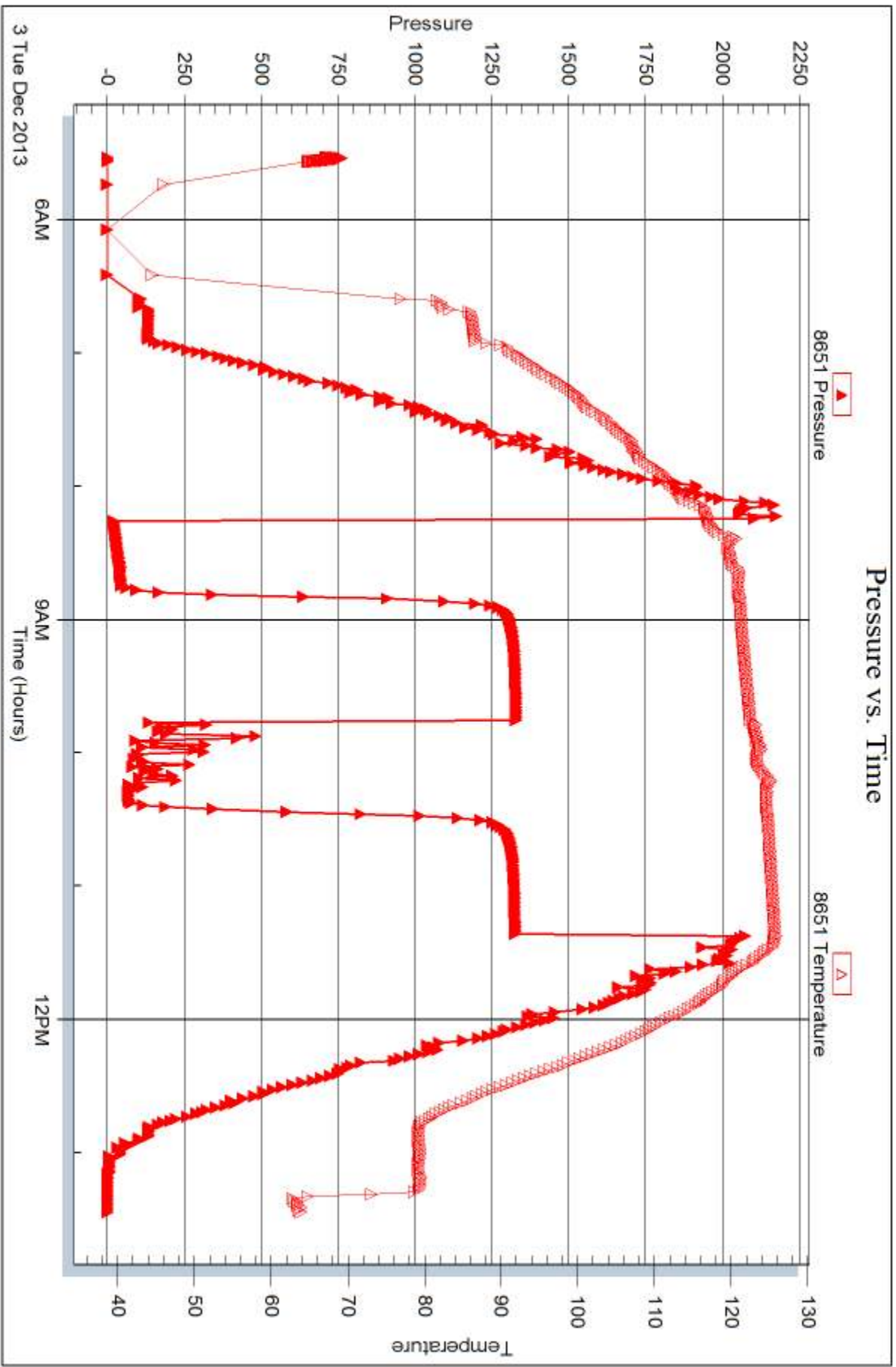


Serial #: 8651

Outside Murfin Drilling Co.

Downing A #1-19

DST Test Number: 4





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water Ste. 300
Wichita KS 67202

ATTN: Rocky Milford

Downing A #1-19

19 1s 35w Rawlins,KS

Start Date: 2013.12.03 @ 23:28:00

End Date: 2013.12.04 @ 09:33:00

Job Ticket #: 55929 DST #: 5

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.12.06 @ 10:00:11



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co.
 250 N. Water Ste. 300
 Wichita KS 67202
 ATTN: Rocky Milford

19 1s 35w Rawlins,KS
Downing A #1-19
 Job Ticket: 55929 **DST#: 5**
 Test Start: 2013.12.03 @ 23:28:00

GENERAL INFORMATION:

Formation: **LKC G-I**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:31:30
 Time Test Ended: 09:33:00
 Interval: **4266.00 ft (KB) To 4333.00 ft (KB) (TVD)**
 Total Depth: 4333.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Chuck Kreuzer Jr.
 Unit No: 61
 Reference Elevations: 3211.00 ft (KB)
 3206.00 ft (CF)
 KB to GR/CF: 5.00 ft

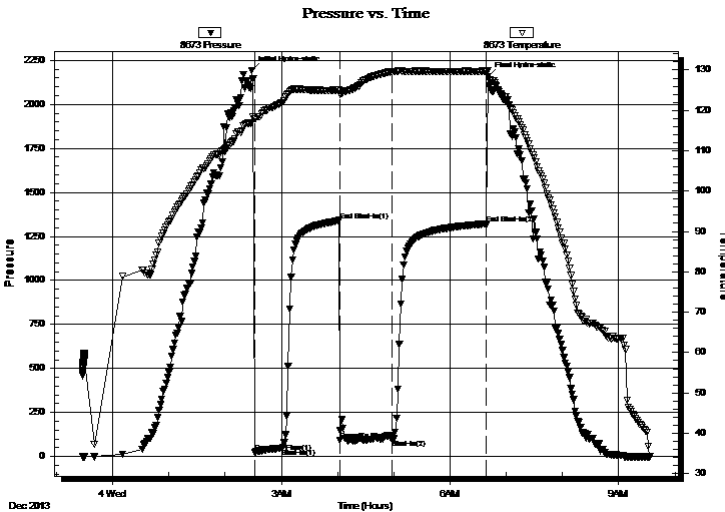
Serial #: 8673

Inside

Press@RunDepth: 99.28 psig @ 4267.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.12.03 End Date: 2013.12.04 Last Calib.: 2013.12.04
 Start Time: 23:28:01 End Time: 09:33:00 Time On Btm: 2013.12.04 @ 02:28:30
 Time Off Btm: 2013.12.04 @ 06:40:30

TEST COMMENT: IF: Weak blow , Built to 2 in. over 30 mins.
 IS: No blow back over 60 mins.
 FF: weak blow , Built to 1 in. over 60 mins.
 FS: No blow back over 90 mins.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2193.17	116.94	Initial Hydro-static
3	24.41	117.90	Open To Flow (1)
33	48.81	121.87	Shut-In(1)
94	1341.11	124.99	End Shut-In(1)
94	90.62	124.22	Open To Flow (2)
150	99.28	129.59	Shut-In(2)
250	1321.75	129.76	End Shut-In(2)
252	2156.08	129.91	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	ocm-25%o75%m	0.30
62.00	go-10%g90%o	0.30
76.00	go-20%g80%o	0.51

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



DRILL STEM TEST REPORT

Murfin Drilling Co.
 250 N. Water Ste. 300
 Wichita KS 67202
 ATTN: Rocky Milford

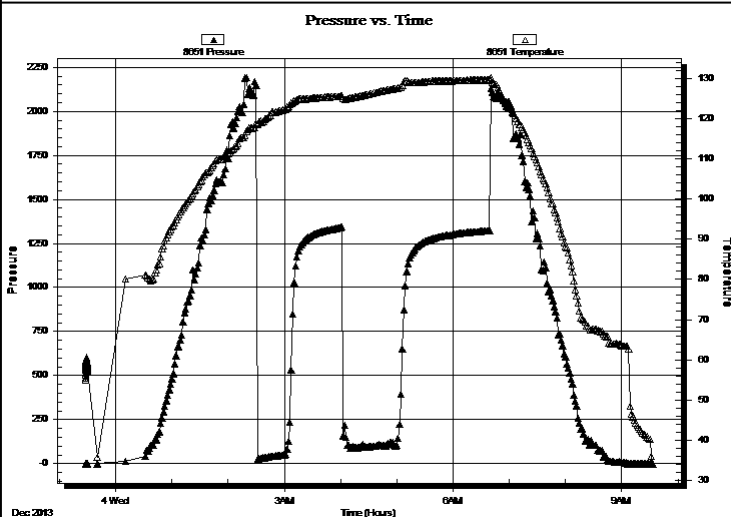
19 1s 35w Rawlins,KS
Downing A #1-19
 Job Ticket: 55929 **DST#: 5**
 Test Start: 2013.12.03 @ 23:28:00

GENERAL INFORMATION:

Formation: **LKC G-I**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:31:30
 Time Test Ended: 09:33:00
 Interval: **4266.00 ft (KB) To 4333.00 ft (KB) (TVD)**
 Total Depth: 4333.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Chuck Kreuzer Jr.
 Unit No: 61
 Reference Elevations: 3211.00 ft (KB)
 3206.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8651 Outside
 Press@RunDepth: psig @ 4267.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.12.03 End Date: 2013.12.04 Last Calib.: 2013.12.04
 Start Time: 23:28:01 End Time: 09:33:00 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: Weak blow, Built to 2 in. over 30 mins.
 IS: No blow back over 60 mins.
 FF: weak blow, Built to 1 in. over 60 mins.
 FS: No blow back over 90 mins.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
62.00	ocm-25%o75% m	0.30
62.00	go-10%g90% o	0.30
76.00	go-20%g80% o	0.51

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 55929

DST#: 5

ATTN: Rocky Milford

Test Start: 2013.12.03 @ 23:28:00

Tool Information

Drill Pipe:	Length: 4069.00 ft	Diameter: 3.80 inches	Volume: 57.08 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 54000.00 lb
			<u>Total Volume: 57.99 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4266.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	67.00 ft			
Tool Length:	95.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4243.00	
Hydraulic tool	5.00			4248.00	
Jars	5.00			4253.00	
Safety Joint	3.00			4256.00	
Packer	5.00			4261.00	28.00 Bottom Of Top Packer
Packer	5.00			4266.00	
Stubb	1.00			4267.00	
Recorder	0.00	8673	Inside	4267.00	
Recorder	0.00	8651	Outside	4267.00	
Perforations	29.00			4296.00	
change Over Sub	1.00			4297.00	
Blank Spacing	32.00			4329.00	
Change Over Sub	1.00			4330.00	
Bullnose	3.00			4333.00	67.00 Bottom Packers & Anchor

Total Tool Length: 95.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 55929

DST#: 5

ATTN: Rocky Milford

Test Start: 2013.12.03 @ 23:28:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	ocm-25%o75%m	0.305
62.00	go-10%g90%o	0.305
76.00	go-20%g80%o	0.510

Total Length: 200.00 ft Total Volume: 1.120 bbl

Num Fluid Samples: 0

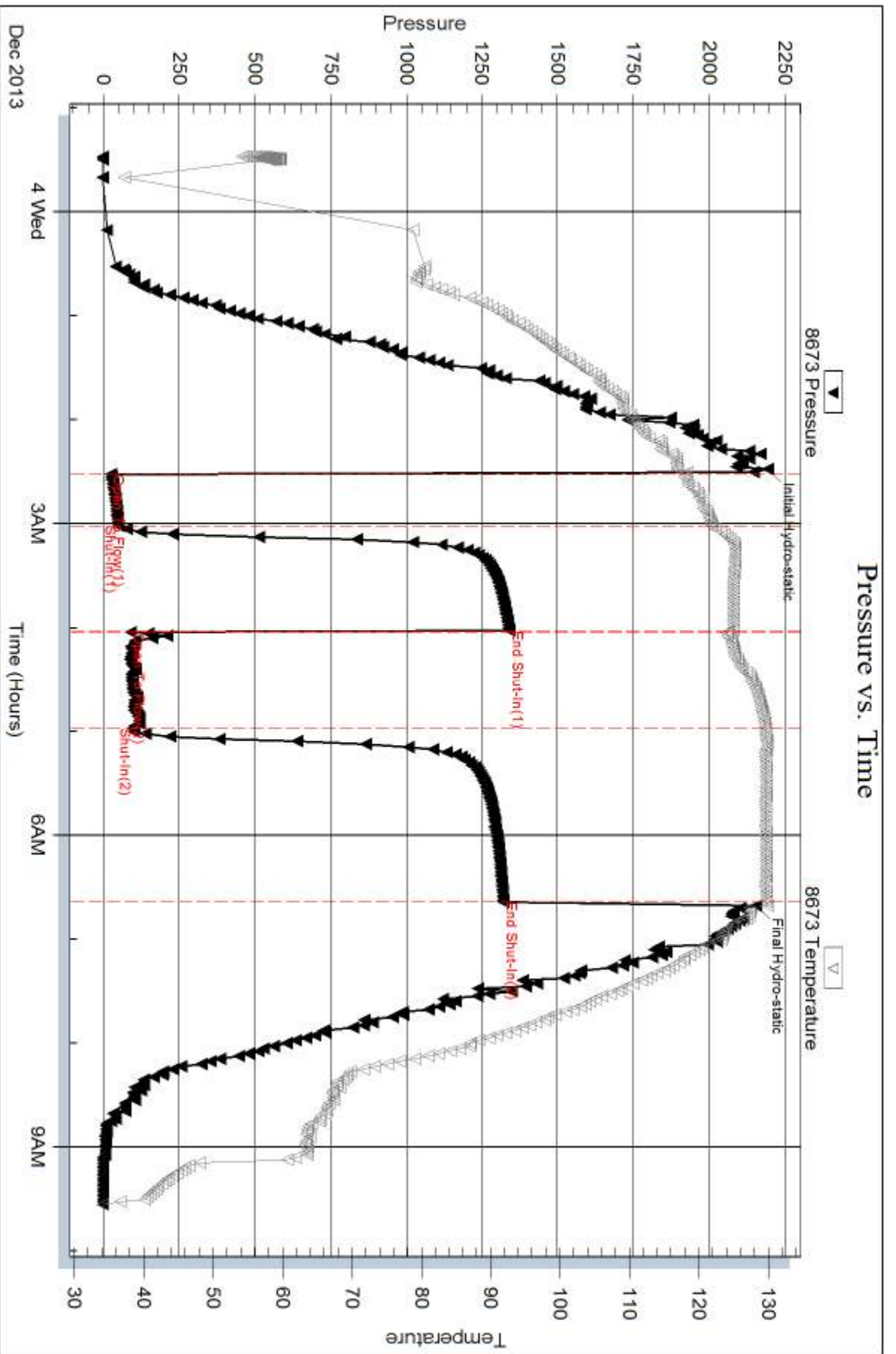
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

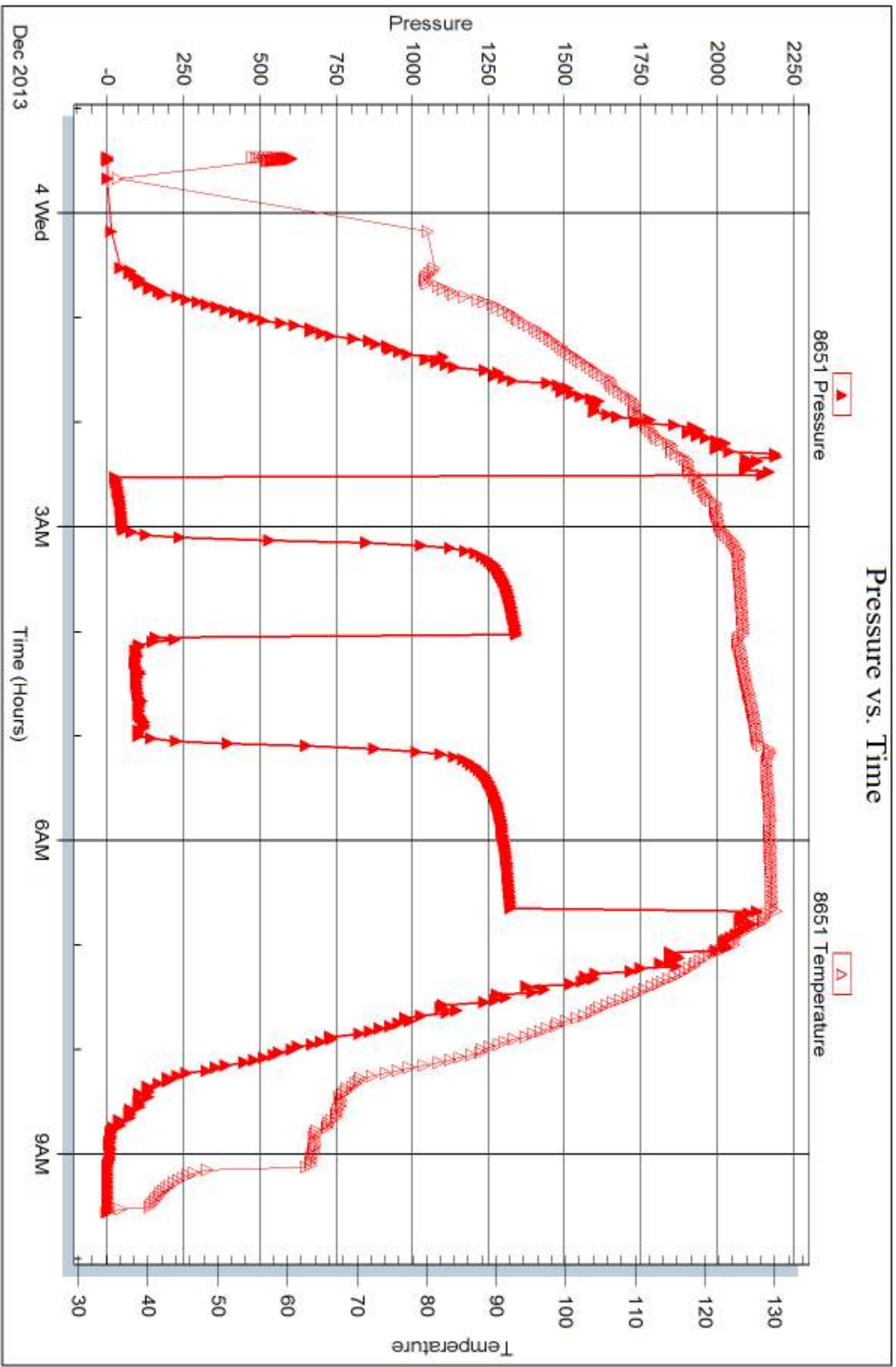


Serial #: 8651

Outside Murfin Drilling Co.

Downing A #1-19

DST Test Number: 5





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N. Water Ste. 300
Wichita KS 67202

ATTN: Rocky Milford

Downing A #1-19

19 1s 35w Rawlins,KS

Start Date: 2013.12.04 @ 18:55:00

End Date: 2013.12.05 @ 06:01:00

Job Ticket #: 55930 DST #: 6

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.12.06 @ 09:58:19



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co.

19 1s 35w Rawlins, KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 55930

DST#: 6

ATTN: Rocky Milford

Test Start: 2013.12.04 @ 18:55:00

GENERAL INFORMATION:

Formation: **LKC-J**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 22:01:00
 Time Test Ended: 06:01:00
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Chuck Kreuzer Jr.
 Unit No: 61
 Interval: **4312.00 ft (KB) To 4364.00 ft (KB) (TVD)**
 Total Depth: 4364.00 ft (KB) (TVD)
 Reference Elevations: 3211.00 ft (KB)
 3206.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 KB to GR/CF: 5.00 ft

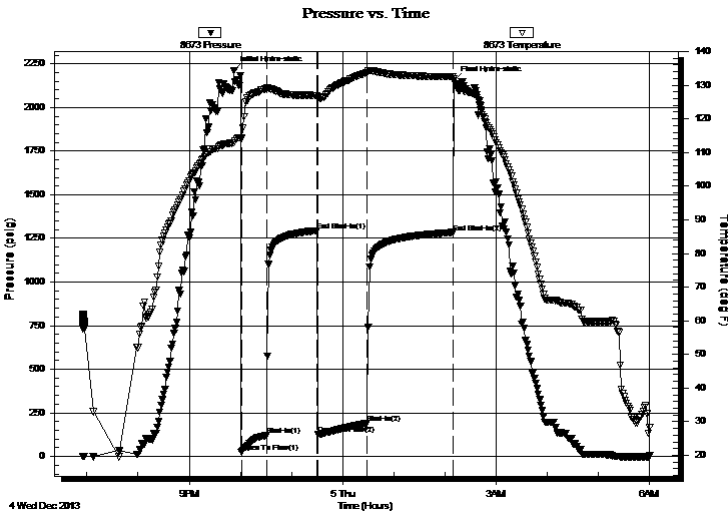
Serial #: 8673

Inside

Press@RunDepth: 191.16 psig @ 4313.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.12.04 End Date: 2013.12.05 Last Calib.: 2013.12.05
 Start Time: 18:55:01 End Time: 06:01:00 Time On Btm: 2013.12.04 @ 21:52:30
 Time Off Btm: 2013.12.05 @ 02:10:30

TEST COMMENT: IF: Strong blow , Built to B.O.B in 19 mins.
 IS: No blow back over 60 mins.
 FF: Weak blow , Built to 1 ln. over 90 mins.
 FS: No blow back over 90 mins.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2212.82	112.98	Initial Hydro-static
9	23.09	113.96	Open To Flow (1)
39	121.59	128.94	Shut-In(1)
98	1294.81	126.93	End Shut-In(1)
99	125.57	126.41	Open To Flow (2)
157	191.16	133.86	Shut-In(2)
257	1284.11	132.53	End Shut-In(2)
258	2156.29	132.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
248.00	mcw -80%w 20%m	1.79
126.00	ocmw -20%o40%w 40%m	1.77
1.00	oil-100%	0.01

* Recovery from multiple tests

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co.
250 N. Water Ste. 300
Wichita KS 67202
ATTN: Rocky Milford

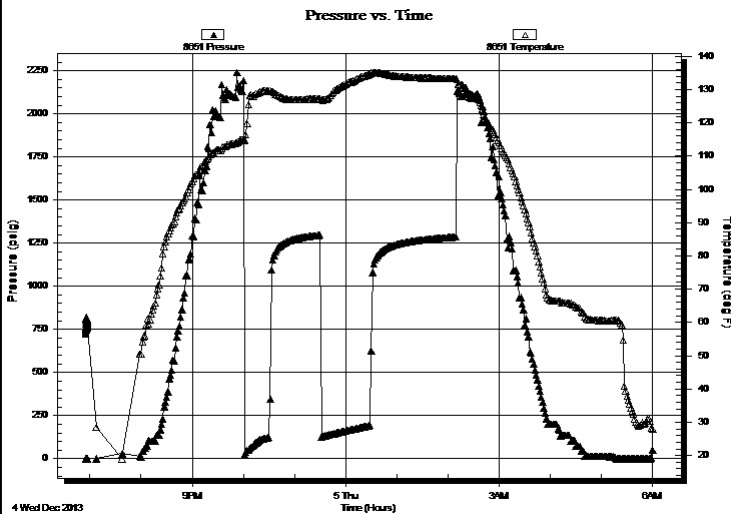
19 1s 35w Rawlins, KS
Downing A #1-19
Job Ticket: 55930 **DST#: 6**
Test Start: 2013.12.04 @ 18:55:00

GENERAL INFORMATION:

Formation: **LKC-J**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:01:00
Time Test Ended: 06:01:00
Interval: **4312.00 ft (KB) To 4364.00 ft (KB) (TVD)**
Total Depth: 4364.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Chuck Kreutzer Jr.
Unit No: 61
Reference Elevations: 3211.00 ft (KB)
3206.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8651 Outside
Press@RunDepth: psig @ 4313.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.12.04 End Date: 2013.12.05 Last Calib.: 2013.12.05
Start Time: 18:55:01 End Time: 06:00:30 Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Strong blow , Built to B.O.B in 19 mins.
IS: No blow back over 60 mins.
FF: Weak blow , Built to 1 In. over 90 mins.
FS: No blow back over 90 mins.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
248.00	mcw -80%w 20%m	1.79
126.00	ocmw -20%o40%w 40%m	1.77
1.00	oil-100%	0.01

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 55930

DST#: 6

ATTN: Rocky Milford

Test Start: 2013.12.04 @ 18:55:00

Tool Information

Drill Pipe:	Length: 4108.00 ft	Diameter: 3.80 inches	Volume: 57.62 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 58.53 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4312.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	52.00 ft			
Tool Length:	80.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	5.00			4289.00	
Hydraulic tool	5.00			4294.00	
Jars	5.00			4299.00	
Safety Joint	3.00			4302.00	
Packer	5.00			4307.00	28.00 Bottom Of Top Packer
Packer	5.00			4312.00	
Stubb	1.00			4313.00	
Recorder	0.00	8673	Inside	4313.00	
Recorder	0.00	8651	Outside	4313.00	
Perforations	15.00			4328.00	
change Over Sub	1.00			4329.00	
Blank Spacing	31.00			4360.00	
Change Over Sub	1.00			4361.00	
Bullnose	3.00			4364.00	52.00 Bottom Packers & Anchor

Total Tool Length: 80.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

19 1s 35w Rawlins,KS

250 N. Water Ste. 300
Wichita KS 67202

Downing A #1-19

Job Ticket: 55930

DST#: 6

ATTN: Rocky Milford

Test Start: 2013.12.04 @ 18:55:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
248.00	mcw -80%w 20%m	1.794
126.00	ocmw -20%o40%w 40%m	1.767
1.00	oil-100%	0.014

Total Length: 375.00 ft

Total Volume: 3.575 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

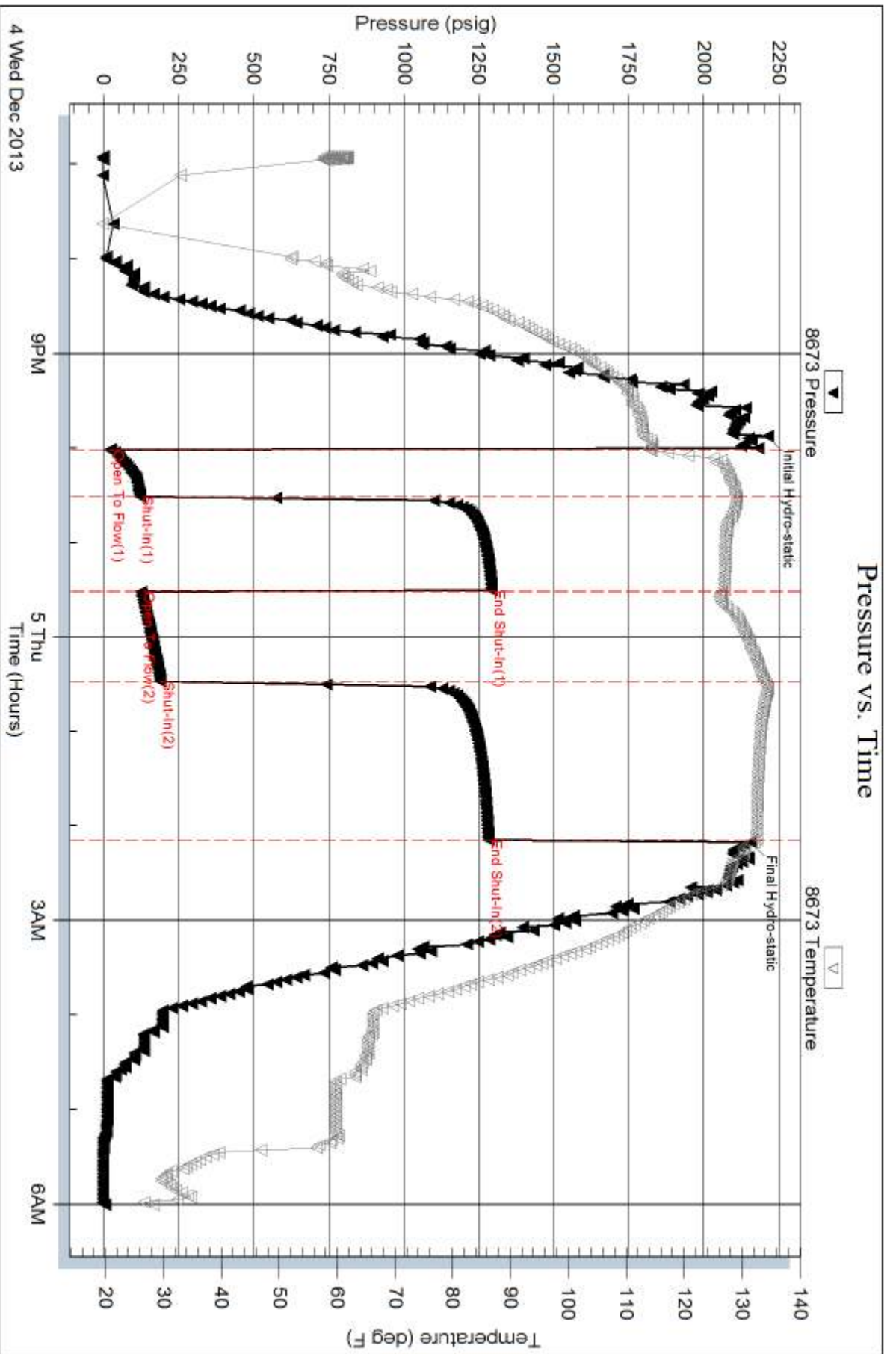
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Inside

Murfin Drilling Co.

Downing A #1-19

DST Test Number: 6



Triobite Testing, Inc

Ref. No: 55930

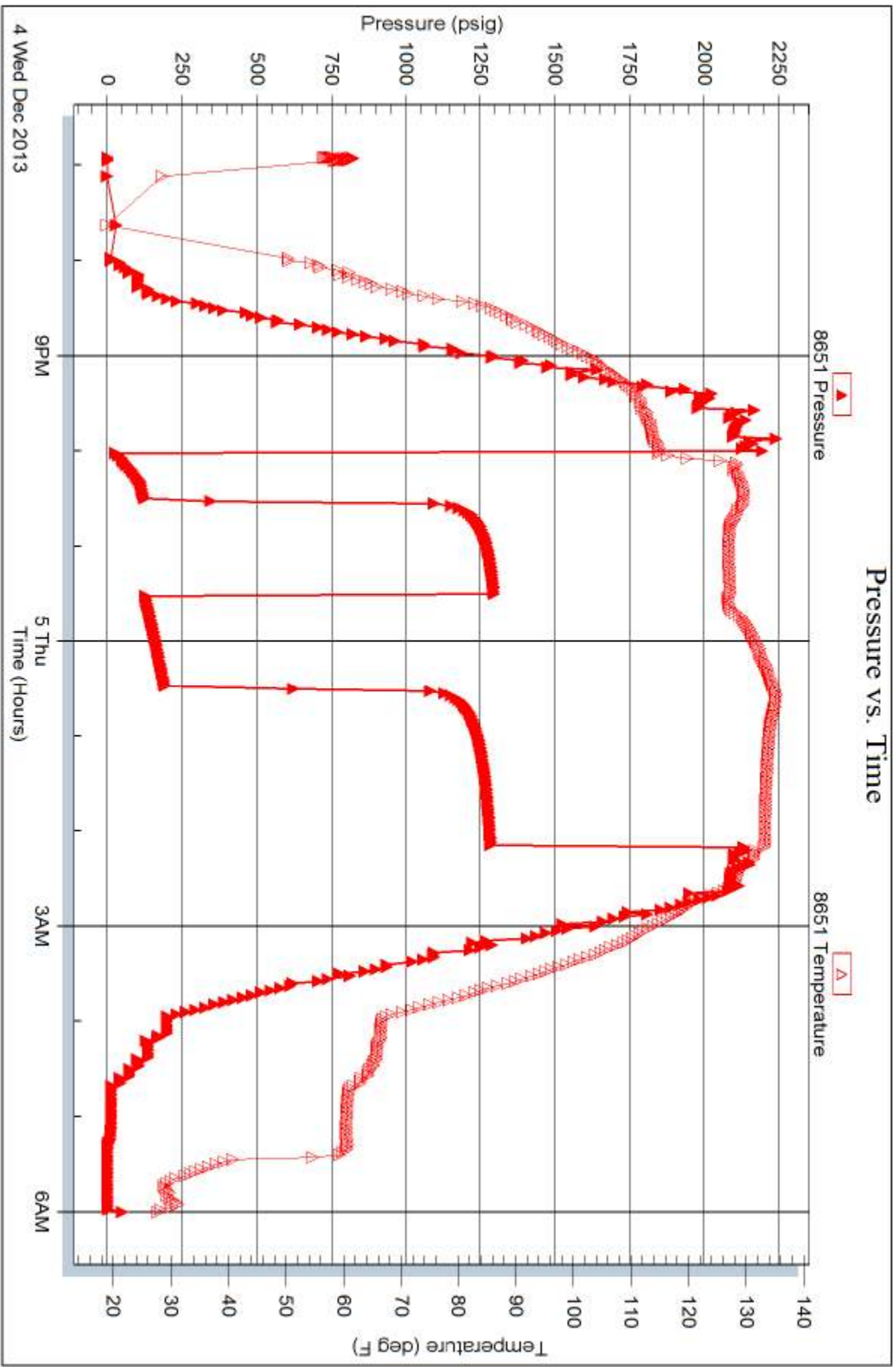
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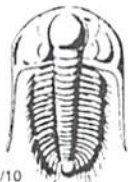
Serial #: 8651

Outside Murfin Drilling Co.

Downing A #1-19

DST Test Number: 6





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53600

Well Name & No. Downing 'A' #1-19 Test No. 1 Date 11-30-2014
 Company MurFin Drilling Co. Inc Elevation 3211 KB 3206 GL
 Address 250 N. Water ste. 300 Wichita Ks
 Co. Rep / Geo. Rocky Milford Rig MurFin #8
 Location: Sec. 19 Twp. 15 Rge. 35W Co. Rawlins State Ks

Interval Tested 3678 3729 Zone Tested Foraker
 Anchor Length 51 Drill Pipe Run 3475 Mud Wt. 8.6
 Top Packer Depth 3675 Drill Collars Run 185 Vis 75
 Bottom Packer Depth 3678 Wt. Pipe Run -0- WL 5.2
 Total Depth 3729 Chlorides 500 ppm System LCM 6#

Blow Description IF: Work surface blow over 30mins
ISF: No blow back
FF: No blow over 30mins
FSF: No blow back over 60mins

Rec	Feet of	%gas	%oil	%water	%mud
<u>25</u>	<u>mud with oil spots</u>				<u>99</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 25 BHT 116 Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

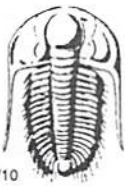
(A) Initial Hydrostatic 1798 Test 1150 T-On Location 4:15
 (B) First Initial Flow 16 Jars 250 T-Started 4:15
 (C) First Final Flow 20 Safety Joint 75 T-Open 7:20
 (D) Initial Shut-In 1073 Circ Sub _____ T-Pulled 10:30
 (E) Second Initial Flow 22 Hourly Standby _____ T-Out 12:54
 (F) Second Final Flow 25 Mileage 55x2 = 110x1.55 = 170.50 Comments See Fluid Rec. sheet.
 (G) Final Shut-In 1047 Sampler _____
 (H) Final Hydrostatic 1719 Straddle _____
 Shale Packer _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____

Sub Total 0
 Total 1645.50
 MP/DST Disc't _____
 Sub Total 1645.50

Approved By _____ Our Representative Chuck King

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55926

Well Name & No. Downing 'A' #1-19 Test No. 2 Date 12-01-13
 Company Murfin Drilling Co. Elevation 3211 KB 3206 GL
 Address 250 N. water ste. 300 Wichita Ks
 Co. Rep / Geo. Rocky Milford Rig Murfin 8
 Location: Sec. 19 Twp. 15 Rge. 35W Co. Rawlins State Ks.

Interval Tested 4084 4175 Zone Tested LKC-A
 Anchor Length 91 Drill Pipe Run 3882 Mud Wt. 9.2
 Top Packer Depth 4079 Drill Collars Run 185 Vis 60
 Bottom Packer Depth 4084 Wt. Pipe Run -0- WL 6.0
 Total Depth 4175 Chlorides 600 ppm System LCM 5#

Blow Description IF: Weak surface blow over 30mins
IST: No blow back
FF: Weak blow After 10 mins. ON and OFF over Next 20 mins.
FST: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>63</u>	<u>mud</u>			<u>100</u>	

Rec Total 63 BHT 1250 Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2033</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>15:40</u>
(B) First Initial Flow <u>18</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>16:10</u>
(C) First Final Flow <u>34</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>20:28</u>
(D) Initial Shut-In <u>1230</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>23:30</u>
(E) Second Initial Flow <u>39</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>2:08</u>
(F) Second Final Flow <u>50</u>	<input checked="" type="checkbox"/> Mileage <u>55x2=110x.55=</u> 170.50	Comments <u>Start backline AT</u>
(G) Final Shut-In <u>1199</u>	<input type="checkbox"/> Sampler _____	Rig time? _____
(H) Final Hydrostatic <u>2007</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>91.67</u>
Final Flow <u>30</u>	<input checked="" type="checkbox"/> Day Standby <u>1d 2.75h</u>	Total <u>1837.17</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1745.50</u>	

Approved By _____ Our Representative chick

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55927**

Well Name & No. Downing A' # 1-19 Test No. 3 Date 12-2-2013
 Company MurFin Drilling Co. Elevation 3211 KB 3206 GL
 Address 250 N. Water Ste. 300 Wichita Ks.
 Co. Rep / Geo. Rocky Milford Rig MurFin # 8
 Location: Sec. 19 Twp. 1S Rge. 35W Co. Rawlins State Ks.

Interval Tested 4156 4218 Zone Tested LRC-0
 Anchor Length 62 Drill Pipe Run 3975 Mud Wt. 9.0
 Top Packer Depth 4151 Drill Collars Run 185 Vis 62
 Bottom Packer Depth 4156 Wt. Pipe Run - 0' WL 5.2
 Total Depth 4218 Chlorides 700 ppm System LCM 4#

Blow Description IF: Strong blow, Built to B.O.B in 15 mins.
ISI: Blow back after 5 mins. Built to 3in. over 60 mins.
FF: Strong blow, Built to ~~B.O.B~~ B.O.B in 20 mins.
FST: ~~See~~ blow back after 5 mins. Weak surface Died in 60 mins.

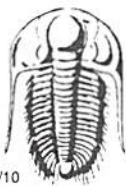
see sheet for full results

Rec	Feet of	%gas	%oil	%water	%mud
<u>0</u>	<u>252 ft gas in pipe</u>				
<u>126</u>	<u>go</u>	<u>20</u>	<u>80</u>		
<u>63</u>	<u>gmco</u>	<u>5</u>	<u>85</u>		<u>10</u>
<u>126</u>	<u>gwocm</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>70</u>
<u>126</u>	<u>gvsocmw</u>	<u>10</u>	<u>1</u>	<u>59</u>	<u>30</u>
<u>185</u>	<u>9ocmw</u>	<u>5</u>	<u>5</u>	<u>70</u>	<u>10</u>

Rec Total 626 BHT 135 Gravity 30 API RW .2 @ 60 °F Chlorides 40,000 ppm

(A) Initial Hydrostatic <u>2054</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>10:10</u>
(B) First Initial Flow <u>35</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>10:35</u>
(C) First Final Flow <u>153</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>12:50</u>
(D) Initial Shut-In <u>1052</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>16:50</u>
(E) Second Initial Flow <u>170</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>19:45</u>
(F) Second Final Flow <u>299</u>	<input checked="" type="checkbox"/> Mileage <u>55x2=110x1.55= 170.50</u>	Comments <u>stayed out Benkelman APT</u>
(G) Final Shut-In <u>1621</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2005</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>1745.50</u>
Final Flow <u>60</u>	<input type="checkbox"/> Day Standby	Total
Final Shut-In <u>90</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1745.50</u>	

Approved By _____ Our Representative Chuck Wagner
 Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55928

Well Name & No. Downing 'A' #1-19 Test No. 4 Date 12-3-2013
 Company Murfin Drilling Co. Elevation 3211 KB 3206 GL
 Address 250N. Water Ste 300 Wichita Ks.
 Co. Rep / Geo. Rocky Milford Rig Murfin #8
 Location: Sec. 1A Twp. 15 Rge. 3SW Co. Rawlrs State Ks.

Interval Tested 4214 4275 Zone Tested LKC-6
 Anchor Length 61 Drill Pipe Run 4014 Mud Wt. 9.0
 Top Packer Depth 4209 Drill Collars Run 185 Vis 62
 Bottom Packer Depth 4214 Wt. Pipe Run -0- WL 5.2
 Total Depth 4275 Chlorides 700 ppm System LCM 4#

Blow Description IF: Weak blow, weak surface over 30 mins.
ISF: No blow back
FF: NO blow back
FS: No blow back

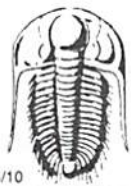
Rec	Feet of	%gas	%oil	%water	%mud
<u>40</u>	<u>61</u>		<u>15</u>		<u>85</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 40 BHT 124 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2166</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>3:00</u>
(B) First Initial Flow <u>19</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>5:32</u>
(C) First Final Flow <u>43</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>8:15</u>
(D) Initial Shut-In <u>1328</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>11:15</u>
(E) Second Initial Flow <u>111</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>13:26</u>
(F) Second Final Flow <u>69</u>	<input checked="" type="checkbox"/> Mileage <u>55x2 = 110x1.55 = 170.50</u>	Comments <u>Benkelman Apt</u>
(G) Final Shut-In <u>1325</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2093</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____

Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby _____	Total <u>1745.50</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1745.50</u>	

Approved By _____ Our Representative chuck the...
 TriLOBITE TESTING INC. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55929

Well Name & No. Downing A* #1-19 Test No. 5 Date 12-4-2013
 Company Murfin Drilling Co. Elevation 3211 KB 3206 GL
 Address 250 N. Water Ste. 300 Wichita Ks.
 Co. Rep / Geo. Rocky Milford Rig Murfin #8
 Location: Sec. 19 Twp. 15 Rge. 35W Co. Rauvins State Ks

Interval Tested 4266 4333 Zone Tested LRC-G-I
 Anchor Length 67 Drill Pipe Run 4069 Mud Wt. 9.1
 Top Packer Depth 4261 Drill Collars Run 185 Vis 60
 Bottom Packer Depth 4266 Wt. Pipe Run -0- WL 5.6
 Total Depth 4333 Chlorides 1000 ppm System LCM 5#

Blow Description IF: Weak blow, built to 2 in. over 30 mins.
FSI: No blow back
FF: Weak blow built to 1 in. over 60 mins.
FSI: No blow back

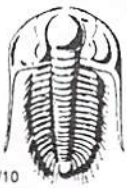
Rec	Feet of	%gas	%oil	%water	%mud
76	90	20	80		
62	90	10	90		
62	OCM		25		75

Rec Total 200 BHT 129 Gravity 30 API RW @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2193</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>22:00</u>
(B) First Initial Flow <u>24</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>23:28</u>
(C) First Final Flow <u>49</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>2:31</u>
(D) Initial Shut-In <u>1341</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>6:50</u>
(E) Second Initial Flow <u>91</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>9:33</u>
(F) Second Final Flow <u>99</u>	<input checked="" type="checkbox"/> Mileage <u>55x2 = 110 x 1.55 = 170.50</u>	Comments <u>stayed Bentline APL</u>
(G) Final Shut-In <u>1322</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2156</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Flow <u>60</u>	<input type="checkbox"/> Day Standby _____	Total <u>1745.50</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1745.50</u>	

Approved By _____ Our Representative Chad [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55930

Well Name & No. Downing Test No. 6 Date 12-4-2013
 Company Murfin Drilling Co Elevation 3211 KB 3208 GL
 Address 250 N. Water ste. 300 Wichita Ks.
 Co. Rep / Geo. Rocky Milford Rig MurFin #8
 Location: Sec. 19 Twp. 1s Rge. 35w Co. Rawlins State Ks

Interval Tested 4312 4364 Zone Tested LKc-5
 Anchor Length 52 Drill Pipe Run 4108 Mud Wt. 9.1
 Top Packer Depth 4307 Drill Collars Run 185 Vis 60
 Bottom Packer Depth 4312 Wt. Pipe Run -0- WL 5.6
 Total Depth 4364 Chlorides 1000 ppm System LCM 5#

Blow Description IF: Strong blow built to B.O.B. in 19 mins
ISJ: No blow back
FF: Weak blow, Built to 1 in. over 60 mins.
RST: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>+</u>	<u>oil</u>		<u>100</u>		
<u>126</u>	<u>OCMW</u>		<u>20</u>	<u>40</u>	<u>40</u>
<u>248</u>	<u>MCW</u>			<u>80</u>	<u>20</u>

Rec Total 375 BHT 134 Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2213</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>17:50</u>
(B) First Initial Flow <u>23</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>18:55</u>
(C) First Final Flow <u>122</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>20:01</u>
(D) Initial Shut-In <u>1295</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>2:00</u>
(E) Second Initial Flow <u>126</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>6:01</u>
(F) Second Final Flow <u>191</u>	<input checked="" type="checkbox"/> Mileage <u>55x2 = 110x1.55 = \$170.50</u>	Comments <u>stayed in Apt. Fr Bankman</u>
(G) Final Shut-In <u>1284</u>	<input checked="" type="checkbox"/> Sampler <u>170.50x2 = 341</u> mileage twice <u>Loaded tools at 4:30</u>	<u>ON 12-6-2013</u>
(H) Final Hydrostatic <u>2156</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Flow <u>60</u>	<input type="checkbox"/> Day Standby _____	Total <u>1916</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1916</u>	

Approved By _____ Our Representative [Signature]
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